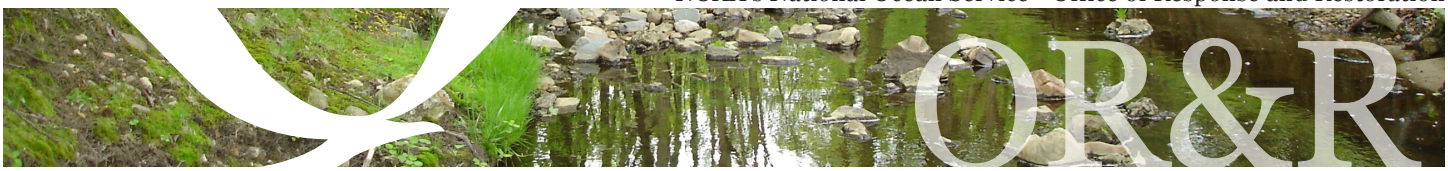

New Water Savings Project at Domtar Plymouth Mill Aimed at Benefiting Roanoke River Fisheries

The Project: In December of 2006, the Weyerhaeuser (now Domtar) Plymouth Mill completed a modification to their cooling water intake system. The project implemented cooling water recirculation to reduce the volume of water withdrawn from the Roanoke River. Because fish eggs and larvae are seasonally present in the river where water is withdrawn, it is anticipated that using less water will benefit early life stages of important Roanoke River fishes.

Background

The Roanoke River, between Plymouth, North Carolina and Albemarle Sound, is one of numerous areas in North America which received discharges from bleached kraft pulp and paper mills. While the local mill virtually eliminated dioxin discharge in the mid-1990s, fish consumption advisories have been in effect there due to dioxin contamination since 1990. To compensate the public for impaired recreational fishing due to releases of dioxin at the Plymouth Mill, Domtar and the natural resource trustees (see list below) have been working on restoration programs as part of a natural resource damage assessment.

The recently initiated water reduction program was described in the Final Phase 1 Restoration Plan (November 2006), which can be reviewed for a detailed description of the project and its expected benefits. Briefly, the cooling water intakes draw tens of millions of gallons of river water per day directly from the Roanoke River. The entire lower Roanoke, including the intake location, is an important nursery area for fish, so redesigning the intake system to reduce the volume of river water withdrawn should contribute to improving future fish abundance for recreational fishing.

Early Results

Water withdrawal volumes reported by Domtar for January through June of 2007 indicate that the recirculation system is, thus far, successful in reducing the volume of water withdrawn from the river. Already, millions fewer gallons of water have been taken from the river, most notably from January through April. Above average water temperatures measured in the Roanoke River for 2007 restricted project effectiveness in May and June. The project partners will continue to monitor the project's performance with the goal of making a long-term projection to quantify the benefits the project will have on the fish population and recreational fishing.

Collaborative Partners:

- Domtar, Inc.
- National Oceanic and Atmospheric Administration of the U.S. Department of Commerce
- United States Fish and Wildlife Service on behalf of the U.S. Department of the Interior
- North Carolina Department of Environmental and Natural Resources

For more info, contact Kate Clark (kate.clark@noaa.gov)

Special thanks to East Carolina University Department of Biology and the U.S. Geological Survey North Carolina Cooperative Fish and Wildlife Research Unit for providing fisheries data and project analysis.

NCDENR NOAA U.S. FISH & WILDLIFE SERVICE Domtar

NOAA's Office of Response & Restoration—Protecting our Coastal Environment

For further information about NOAA's Office of Response and Restoration, please visit our Web site at

http://response.restoration.noaa.gov or call (301) 713-2989.

U.S. Department of Commerce • National Oceanic and Atmospheric Administration

March 2008